

- 1. A composition for planarizing an organosilicate layer, comprising: a slurry including an abrasive material dispersed in a solvent, wherein the slurry has a pH greater than about 9.
- 2. The composition of claim 1 wherein the abrasive material is selected from the group consisting of silica (SiO₂), aluminum oxide (Al₂O₃), zirconium oxide (ZrO₂), titanium oxide (TiO₂), and combinations thereof.
- 3. The composition of claim 1 wherein the abrasive material has an average particle size greater than about 35 nm (nanometers).
- 4. The composition of claim 1 wherein the pH of the slurry is adjusted by adding a source of hydroxyl ions thereto.
- 5. The composition of claim 4 wherein the source of hydroxyl ions is selected from the group consisting of potassium hydroxide (KOH), ammonium hydroxide (NH₄OH), sodium hydroxide (NaOH), calcium hydroxide (CaOH), magnesium hydroxide (MgOH), and combinations thereof.
- 6. The composition of claim 1 wherein the slurry further comprises one or more materials selected from the group consisting of chelating agents, buffers, oxidizers, and corrosion inhibitors.
- 7. The composition of claim 1 wherein the concentration of the abrasive material in the slurry is within a range of about 10% by weight to about 60% by weight.
- 8. A method for planarizing an organosilicate layer, comprising:

positioning a substrate having an organosilicate layer thereon in a polishing system;

providing a slurry including an abrasive material dispersed in a solvent to the polishing system, wherein the slurry has a pH greater than about 9.0; and

polishing the organosilicate layer using the slurry.

- 9. The method of claim 8 wherein the abrasive material is selected from the group consisting of silica (SiO₂), aluminum oxide (Al₂O₃), zirconium oxide (ZrO₂), titanium oxide (TiO₂), and combinations thereof.
- 10. The method of claim 8 wherein the abrasive material has an average particle size greater than about 35 nm (nanometers).
- 11. The method of claim 8 wherein the pH of the slurry is adjusted by adding a source of hydroxyl ions thereto.
- 12. The method of claim 11 wherein the source of hydroxyl ions is selected from the group consisting of potassium hydroxide (KOH), ammonium hydroxide (NH₄OH), sodium hydroxide (NaOH), calcium hydroxide (CaOH), magnesium hydroxide (MgOH).
- 13. The method of claim 8 wherein the slurry further comprises one or more materials selected from the group consisting of chelating agents, buffers, oxidizers, corrosion inhibitors, and combinations thereof.
- 14. The method of claim 8 wherein the concentration of abrasive material in the slurry is within a range of about 10% by weight to about 60% by weight.

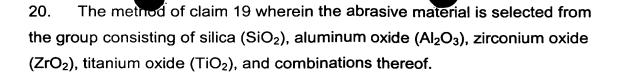
- 15. The method of claim 8 wherein the organosilicate layer is polished by placing it in contact with a polishing pad, the polishing pad having the slurry thereon, and wherein the polishing pad is disposed upon a rotatable platen.
- 16. The method of claim 15 wherein the polishing pad comprises polyurethane.
- 17. The method of claim 15 wherein the organosilicate layer contacts the polishing pad with a pressure within range of about 1 psi (pounds/square inch) to about 14 psi.
- 18. The method of claim 15 wherein the platen rotates at a speed within the range of about 0.1 m/s (meters/second) to about 2 m/s.
- 19. A method for fabricating a device, comprising:

providing a substrate having conductive features formed thereon with an organosilicate layer deposited between and on top of the conductive features;

positioning the substrate in a polishing system;

providing a slurry including an abrasive material dispersed in a solvent to the polishing system, wherein the slurry has a pH greater than about 9; and

polishing the organosilicate layer using the slurry.



- 21. The method of claim 19 wherein the abrasive material has an average particle size greater than about 35 nm (nanometers).
- 22. The method of claim 19 wherein the pH of the slurry is adjusted by adding a source of hydroxyl ions thereto.
- 23. The method of claim 22 wherein the source of hydroxyl ions is selected from the group consisting of potassium hydroxide (KOH), ammonium hydroxide (NH₄OH), sodium hydroxide (NaOH), calcium hydroxide (CaOH), and magnesium hydroxide (MgOH).
- 24. The method of claim 19 wherein the slurry further comprises one or more materials selected from the group consisting of chelating agents, buffers, oxidizers, corrosion inhibitors, and combinations thereof.
- 25. The method of claim 19 wherein the concentration of abrasive material in the slurry is within a range of about 10% by weight to about 60% by weight.
- 26. The method of claim 19 wherein the organosilicate layer is polished by placing it in contact with a polishing pad having the slurry thereon, and wherein the polishing pad is disposed upon a rotatable platen.
- 27. The method of claim 26 wherein the polishing pad comprises polyurethane.

- 28. The method of claim 26 wherein the organosilicate layer contacts the polishing pad with a pressure within a range of about 1 psi (pounds/square inch) to about 14 psi.
- 29. The method of claim 26 wherein the platen rotates at a speed within a range of about 0.1 m/s (meters/second) to about 2.0 m/s.